

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER QUIS, COLIN LIDDIARD

And

MANFRED BRAUM

Appeal No. 2002-1736
Application No. 09/333,917

HEARD: FEBRUARY 4, 2003

Before KIMLIN, PAK, and MOORE, Administrative Patent Judges.
MOORE, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 1 - 16, which are all of the claims pending in this application.

REPRESENTATIVE CLAIM

Claim 1 is representative of the claimed subject matter, and appears on the following page.

Appeal No. 2002-1736
Application No. 09/333,917

1. A low-odor, cold-curing (meth)acrylate reaction resin for a floor coating, comprising:

- (A) (a) 50-100 wt% [of] a (meth)acrylate comprised of
 - 0-5 wt% of a methyl (meth)acrylate;
 - 0-5 wt% of an ethyl (meth)acrylate;
 - 0-97 wt% of a C₃-C₆ (meth)acrylate;
 - 0-50 wt% of \geq C₇ (meth)acrylate;
 - 3-10 wt% of a multifunctional (meth)acrylate; and
- (b) 0-50 wt% of a comonomer, comprised of
 - 0-30 wt% of a vinyl aromatic; and
 - 0-30 wt% of a vinyl ester

wherein the sum of all components of (a) and (b) in (A) is 100 wt%;

(B) 0-2 parts by weight per 1 part by weight of Component (A) of a pre-polymer that dissolves or swells in (A); and wherein the proportion of methyl (meth)acrylate or ethyl (meth)acrylate is less than 5 wt%, based on Component B;

(C) 2-5 parts by weight per 100 parts by weight based on Components (A) + (B) of at least one paraffin and/or wax;

(D) a redox system, containing an accelerator and a peroxide catalyst or initiator in an amount that is adequate for cold-curing of Component (A); and

(E) a conventional additive,

wherein the multifunctional (meth)acrylate and component (C) are together present in an amount effective for the reaction resin, when applied to concrete at a thickness of approximately 1cm and set at ambient temperature for 90 minutes, to be non-tacky.

Appeal No. 2002-1736
Application No. 09/333,917

The Reference

Hari et al. (Hari)	5,516,546	May 14, 1996
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The Rejection

Claims 1-16 are rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Hari.

The Invention

The invention is directed to a low-odor, cold curing (meth)acrylate resin for a floor coating, including a (meth)acrylate composition with a multifunctional (meth)acrylate (A), an optional prepolymer (B), at least one paraffin or wax (C), a redox system (D), and a conventional additive, wherein the resin sets up at ambient temperature in 90 minutes and is non-tacky.

The Rejection of Claims 1-16 Under 35 U.S.C. § 102(b)/§ 103(a)

Claims 1-16 stand rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Hari.

Appeal No. 2002-1736
Application No. 09/333,917

The examiner has found that Hari discloses a methacrylate conductive floor composition wherein "[t]he (meth)acrylates, which are utilized as a component (A) are listed in [the] table on lines 30-35 of col. 3 **are clearly identical by their nature and relative amounts to the ones of instant claim 1.**" (Examiner's Answer, page 4, lines 1-3)(Emphasis in Original). We disagree.

While Hari clearly encompasses the instantly claimed ranges of methacrylates and other components (Hari, column 2, line 39 - column 3, line 16), it does not disclose the invention as claimed within the meaning of 35 U.S.C. § 102(b). See In re Schaumann, 572 F.2d 312, 315, 197 USPQ 5, 8 (CCPA 1978) (A reference must provide a disclosure with "sufficient specificity" to constitute a description of the claimed composition within the purview of 35 U.S.C. § 102(b)). Although some picking and choosing of components from within the ranges disclosed in Hari to arrive at the claimed subject matter may be entirely proper in the making of an obviousness rejection, it has no place in making a rejection under 35 U.S.C. § 102(b). See In re Arkley, 455 F.2d 586, 587-88, 172 USPQ 524, 526 (CCPA 1972).

Accordingly, we reverse the 35 U.S.C. §102(b) rejection as it applies to claims 1-16.

Appeal No. 2002-1736
Application No. 09/333,917

Turning now to the 35 U.S.C. § 103(a) rejection, we find that Hari exemplifies each of the claimed constituents, generally in ranges which overlap. See, e.g., Hari, column 2, lines 39 - 50 and column 3, lines 27-35 which discloses component (A) and its constituents; column 2, lines 52-53 for component (B); column 4, lines 49-56 for component (C); column 2, lines 55 - 60 for component (D); and column 2, line 61 for component (E).

The appellant's first argument challenges the cited reference's disclosure, stating that Hari prefers a methyl (meth)acrylate concentration of a minimum amount of 55% by weight, which is in excess of the limitation in the claim of less than 5% (Appeal Brief, page 5, lines 21-23). We are not persuaded by this argument.

All of the disclosures of a prior art reference, including non-preferred embodiments, must be considered for what they fairly teach one of ordinary skill in the art. Merck & Co. Inc. v. Biocraft Labs. Inc., 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989); In re Fracalossi, 681 F.2d 792, 794 n.1, 215 USPQ 569, 570 n.1 (CCPA 1982); In re Lamberti, 545 F.2d 747, 750, 192 USPQ 278, 280 (CCPA 1976); In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). Hari clearly teaches ranges which encompass the claimed subject matter.

Appeal No. 2002-1736
Application No. 09/333,917

The appellants also correctly point out that Claim 1 additionally contains the limitation of a minimum amount of the multifunctional (meth)acrylate and component (C) to avoid tackiness of the cured resin. (Appeal Brief, page 6, last paragraph). These minimum amounts are, however, well within the disclosed ranges of Hari. Specifically, 3-10 wt% (of component A) multifunctional methacrylate falls within 0-100% wt % (of component A) disclosed at Hari, column 3, line 32; and 2-5 parts paraffin or wax by weight per 100 (based on A+B) falls within 0.05 - 5% by weight paraffin disclosed at column 4, lines 54-56.

A prima facie case of obviousness typically exists when the ranges of a claimed composition overlap the ranges disclosed in the prior art. In re Geisler, 116 F.3d 1465, 1469, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (CCPA 1976); In re Malagari, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974).

In general, an applicant may overcome a prima facie case of obviousness by establishing "that the [claimed] range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." Geisler, 116 F.3d at 1469-70, 43 USPQ2d at 1365 (alteration in original) (quoting In re Woodruff, 919 F.2d at 1578, 16 USPQ2d at 1936).

That same standard applies when, as here, the applicant seeks to

Appeal No. 2002-1736
Application No. 09/333,917

optimize certain variables by selecting narrow ranges from broader ranges disclosed in the prior art. See Geisler, 116 F.3d at 1470, 43 USPQ2d at 1365 ("Only if the 'results of optimizing a variable' are 'unexpectedly good' can a patent be obtained for the claimed critical range." (quoting In re Antoine, 559 F.2d 618, 620, 195 USPQ 6, 8 (CCPA 1977))); In re Wertheim, 541 F.2d 257, 267, 191 USPQ 90, 100 (CCPA 1976) (recognizing that "ranges which overlap or lie inside ranges disclosed by the prior art may be patentable if the applicant can show criticality in the claimed range by evidence of unexpected results").

Moreover, the applicant's showing of unexpected results must be commensurate in scope with the claimed range. See In re Greenfield, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978) (Establishing that one (or a small number of) species gives unexpected results is inadequate proof, for objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support. (quoting In re Tiffin, 448 F.2d 791, 792, 171 USPQ 294, 294 (CCPA 1971))).

The appellants argue that the instantly claimed ranges have unexpected results based primarily upon the data in the specification, page 26. Our review of the data finds that it is insufficient to overcome the prima facie case of obviousness or establish criticality. Only one data point for the claimed range is

Appeal No. 2002-1736
Application No. 09/333,917

provided for paraffin (3 parts by weight (pbw)) and two points (3 and 5 pbw) for 1,4 dimethacrylate. Although within the claimed ranges, these data points can hardly be said to be representative of the broader claimed ranges of 2-5 pbw and 3-10 pbw, respectively. Nor could a single component be said to be representative of the various components covered by the claims.

We therefore affirm this rejection as it applies to 35 U.S.C. §103(a).

Summary

The rejection of claims 1-16 under 35 U.S.C. § 102(b) as anticipated by Hari is reversed.

The rejection of claims 1-16 under 35 U.S.C. § 103(a) as obvious over Hari is sustained.

Appeal No. 2002-1736
Application No. 09/333,917

No time period for taking any subsequent action in connection
with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
)	
)	BOARD OF PATENT
CHUNG K. PAK)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
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